

Transmission of Human Papillomavirus in Heterosexual Couples

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CME ACTIVITY

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Learning Objectives

Upon completion of this activity, participants will be able to:

- Identify the most common baseline human papillomavirus (HPV) status of couples
- Specify the most common mode of transmission of HPV between couples
- Describe the role of anatomic sites in the transmission of HPV
- Identify behavioral factors associated with the transmission of HPV

Editor

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We examined the transmission of human papillomavirus (HPV) in 25 heterosexual, monogamous couples (25 men, 25 women), followed up over an average of 7.5 months. A total of 53 heterosexual transmission events were observed among 16 couples (14 male-to-female and 39 female-to-male). Sexual transmission involved 13 different oncogenic and nononcogenic HPV types; 8% were vaccine-covered types transmitted between partners. The overall rate of HPV transmission from the penis to the cervix was 4.9/100 person-months, which was substantially lower than that from the cervix to the penis (17.4/100 person-months). Transmission between the hands and genitals, as well as apparent self-inoculation events (primarily in men), were also observed. Couples who transmitted HPV were more sexually active and used condoms less frequently. These results have implications for HPV prevention and control strategies, including the targeting of prophylactic vaccines.

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Cervical cancer remains a major source of illness and death among women globally, and infection with oncogenic human papillomaviruses (HPVs) is its principal cause (1,2). Men are assumed to be the main reservoirs of genital HPV infection for women, although comparatively little is known about the natural history of HPV in men.

A limited number of cross-sectional and case-control studies have evaluated genotype-specific HPV concordance in male-female couples (3–7). There are, however, no empirical data on the heterosexual transmission of HPV. Our investigation evaluates the transmission of HPV in a cohort of male-female sexual partners.

Methods

Study Participants

The study was conducted at the University Health Services of the University of Hawaii at Manoa from February 2005 through November 2006. Promotional efforts includ-

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Article Title

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CME Questions

1. Which of the following was the most common human papillomavirus (HPV) status at baseline in the current study cohort?
A. Both partners HPV-negative
B. One partner HPV-negative and one HPV-positive
C. Both partners HPV-positive with the same HPV type
D. Both partners HPV-positive with different HPV types

2. What was the most common means of HPV transmission in the current study?
A. Male-to-female transmission
B. Female-to-male transmission
C. Male auto-inoculation
D. Female auto-inoculation

3. Which of the following statements about anatomic sites of transmission of HPV in the current study is *most accurate*?
A. Most women obtained infection from the glans of the penis
B. The female anus was not a significant site of transmission to men
C. There were no cases of transmission from the women's hands to the men's genitals
D. Among men, the rate of auto-inoculation was comparable to the rate of transmission from women

4. Which of the following factors from the current study was *most significant* in the risk for HPV transmission?
A. Frequency of condom use
B. Length of relationship
C. Any history of anal intercourse
D. A history of genital herpes

Activity Evaluation

1. The activity supported the learning objectives.				
Strongly Disagree				Strongly Agree
1	2	3	4	5
2. The material was organized clearly for learning to occur.				
Strongly Disagree				Strongly Agree
1	2	3	4	5
3. The content learned from this activity will impact my practice.				
Strongly Disagree				Strongly Agree
1	2	3	4	5
4. The activity was presented objectively and free of commercial bias.				
Strongly Disagree				Strongly Agree
1	2	3	4	5